

ABSTRACT OF THE DISCLOSURE

The present invention provides a surface treatment apparatus which can treat a surface with high speed and high quality. A casing of a surface treatment apparatus is defined into two chambers, a plasma generation chamber provided with a plasma generation electrode and a substrate treatment chamber provided with a substrate support table. A plasma nozzle is formed on an anode electrode constituting a partition wall of the both chambers. A recess is formed on an upper cathode electrode. Further, the plasma nozzle is used as a hollow anode discharge generation area, and the recess as a hollow cathode discharge generation area.